

## ABSTRACT OF THE INVENTION

According to one aspect of the present invention, a method is provided in which an access point and a mobile unit associated with the access point may optionally transmit compressed data to each other if the receiving unit is capable 5 of handling data compression. In one embodiment, the access point communicates to one or more mobile units to inform the one or more mobile units of the access point's compression capabilities. A mobile unit which is associated with the access point, upon being informed that the access point is capable of handling data compression, may optionally compress data prior to transmitting the 10 data to the access point. The access point, upon receiving compressed data from the mobile unit which indicates to the access point that the mobile unit is capable of handling data compression, may optionally compress data prior to transmitting the data to the mobile unit. In one embodiment, the access point considers various factors to decide whether to compress data prior to transmitting the data to the 15 mobile unit. In one embodiment, the mobile unit also considers various factors to decide whether to compress data prior to transmitting the data to the access point.

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